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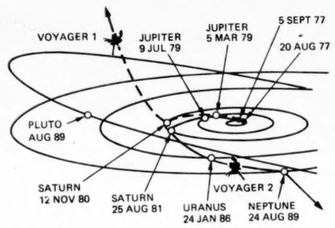

Uranian Rings
P-29498
January 24, 1986

This false-color view of the rings of Uranus was made from images taken by Voyager 2 on January 21, 1986, from a distance of 4.17 million kilometers (2.59 million miles) and with a resolution of approximately 40 kilometers (25 miles). All nine known rings are visible here; the somewhat fainter, pastel lines seen between them are contributed by the process of computer enhancement.

Six 15-second narrow-angle images were used to extract this color information from the extremely dark and faint rings. Two images in each of the green, clear, and violet filters were added together and averaged to find the proper color differences among the rings. The final image was made from these three color averages and represents an enhanced, false-color view.

The image shows that the brightest, or epsilon, ring at the top is neutral in color, with the eight other fainter rings showing color differences among them. Moving down toward Uranus, we see the delta, gamma, and eta rings in shades of blue and green; the beta and alpha rings in somewhat lighter tones; and then a final set of three rings, known simply as 4, 5, and 6, in faint off-white tones. Scientists will use this color information to try to understand the nature and origin of the ring material.

Voyager Mission Highlights

Two unmanned spacecraft, Voyager 1 and 2, completed highly successful flyby encounters of Jupiter and its moons and rings on March 5 and July 9, 1979, respectively. The two Voyagers went on to rendezvous with Saturn on November 12, 1980, and August 25, 1981. Voyager 2 encountered Uranus on January 24, 1986, and discovered ten new moons and additional rings. It will fly past Neptune on August 24, 1989.

Voyager 1 and 2 sent back spectacular images of the Jovian system and made startling new discoveries. Giant volcanoes spew molten sulfur hundreds of kilometers above the surface of Io, one of Jupiter's four largest moons. Liquid oceans lie below the frozen surface of Europa, and craters pockmark the surface of Callisto. Numerous fault lines scar Ganymede. The Voyagers also found three tiny satellites hiding near a thin, flat ring of dust particles encircling the planet.

After Jupiter, both Voyagers sped on to rendezvous with the Saturnian system. The magnificent rings were found to be incredibly complex. Saturn's colors are more muted than Jupiter's, but atmospheric storms are visible. A thick atmosphere of nitrogen and methane shrouds Titan, Saturn's largest moon, hiding its surface.

Both spacecraft continue their outward journey through the cosmos. Voyager 1, traveling above the ecliptic plane, will not encounter another planet in our solar system. The Voyager project is managed for NASA by the Jet Propulsion Laboratory.

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